

DETAILED ACTION

This communication is responsive to Amendment filed 01/04/2008.

Claims 1-8, 9-10, 30 are pending in this application. Claims 1, 30 are independent claims.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Applicant's representative, Mr. Michael Dodd, on November 09, 2009.

Cancel claims 3, 4

The application has been amended as follows:

1. (Currently Amended) A software update distribution system for distributing a software update over a communication network for distribution to client computers, comprising:

a root update service node; and

a plurality of child update service nodes operable to distribute software updates to client computers, wherein each of the plurality of child update service nodes comprises:

an update store for storing software updates;

an update web service through which the child update service node obtains software updates from its parent update service node over the communication network, and through which the child update service node distributes software updates to its child update service nodes over the communication network; and

a child update module for determining software updates available to be distributed to one or more child update service nodes according to the established rules;

a reporting module for generating and sending update activity reports to the parent update service node;

an authentication and authorization module for determining whether an update service node is authorized to obtain software updates from the child update service node;

a client update module for distributing software updates to client computers;

wherein the root update service node and the plurality of child update service nodes are organized in a hierarchical manner such that the root update service node is

a parent update service node to at least one child update service node, wherein each of the plurality of child update service nodes has a parent update service node, and wherein a first child update service node of the plurality of child update service nodes is a parent update service node to a second child update service node of the plurality of child update service nodes;

wherein the root update service node includes a first administration application programming interface (API) and first administration user interface, wherein the first administration API and first administration user interface are operable to receive from an administrator a first set of rules for distributing software updates to at least some of the plurality of child update service nodes;

wherein at least the first child update service node includes a second administration API, separate from the first administration API, and a second administration user interface, separate from the first administration user interface, wherein the second administration API and second administration user interface are operable to receive a second set of rules for distributing software updates from the first child update service node to at least the second child update service node, wherein the second set of rules establishes the second child update service node as belonging to a first group and specifies a subset of the software updates as available to the first group; and

wherein the root update service node obtains a first software update from a software provider, and wherein at least one of the plurality of child update service nodes obtains the first software update for distribution by obtaining the first software update from its parent update service node.

2. (Currently amended) The software update distribution system of Claim 1, wherein the root update service node comprises:

an update store for storing software updates;

an update web service through which the root update service node distributes software updates to its child update service nodes over the communication network;
and

a software provider interface through which a software provider submits its software update over the communication network to the root update distribution node.

3. (Canceled)

4. (Canceled)

5. (Canceled) The software update distribution system of Claim [[4]] 1, wherein the update store comprises an update content store in which the update

payload for the software update is stored, and an update information store in which update metadata for the software update is stored.

6. (Currently Amended) The software update distribution system of Claim 5, wherein the first child update service node obtains the software update from the root update service node by obtaining update metadata for the software update from the root update service node and obtaining the update payload for the software update from the root update service node, and wherein the obtaining the update payload is separate from the obtaining update metadata.

7. (Currently Amended) The software update distribution system of Claim 6, wherein the first child update service node obtains the update payload for the software update from the root update service node in a just-in-time fashion.

8. (Cancelled)

9. (Currently Amended) The software update distribution system of Claim 1, wherein the root update service node further comprises a client update module for distributing software updates to client computers.

10. (Currently Amended) The software update distribution system of Claim [[3]] 1, wherein the first child update service node may be selectively configured to periodically obtain software updates from the root update service node.

11.-29. (Cancelled)

30. (Currently Amended) A computer-implemented method for facilitating the distribution of software updates in a hierarchical arrangement, the method comprising:

providing a root update service node of a hierarchy of update services nodes;

providing a plurality of child update service nodes organized in a hierarchy under the root update service node, wherein each of the plurality of update service nodes is operable to distribute software updates to client computers; and

providing software update information corresponding to software updates for distribution to client computers connected to update services nodes in the hierarchy of update service nodes;

wherein the root update service node is a parent update service node to at least one of the plurality of child update service nodes and wherein each update service node, except the root update service node, has a parent update service node;

wherein at least a first child update service node of the plurality of child update service nodes is a parent update service node to another child update service node of the plurality of child update service nodes; and

wherein each of the plurality of child update service nodes includes an administration application programming interface (API) and administration user interface

through which an administrator establishes a set of rules for distributing software updates, and wherein a first set of rules establishes a first group and specifies a subset of the software updates as available to the first group, wherein each of the plurality of child update service nodes comprises:

storing software updates in an update store;

obtaining software updates from its parent update service node over the communication network through an update web service, and through which the child update service node distributes software updates to its child update service nodes over the communication network;

determining software updates available to be distributed to one or more child update service nodes according to the established rules;

generating and sending update activity reports to the parent update service node;

determining whether an update service node is authorized to obtain software updates from the child update service node; and
distributing software updates to client computers.

Statement of Reasons for Allowance

Claims 1, 2, 5-7, 9, 10, 30 are allowed.

The following is an examiner's statement of reasons for allowance.

The present invention is directed to an update distribution system architecture and method for distributing software updates.

All independent claims 1, 30 recite, or similarly recite, in combination with the remaining elements, wherein each of the plurality of child update service nodes includes an administration application programming interface (API) and administration user interface through which an administrator establishes a set of rules for distributing software updates, and wherein a first set of rules establishes a first group and specifies a subset of the software updates as available to the first group, wherein each of the plurality of child update service nodes comprises: storing software updates in an update store; obtaining software updates from its parent update service node over the communication network through an update web service, and through which the child update service node distributes software updates to its child update service nodes over the communication network; determining software updates available to be distributed to one or more child update service nodes according to the established rules; generating and sending update activity reports to the parent update service node; determining whether an update service node is authorized to obtain software updates from the child update service node; and distributing software updates to client computers.

The closest prior art, Mayer et al (USP 20020019864), in view of Melchione et al (USP 20030200300), and further in view of Crudele et al (US 6973,647) show similar methods of data processing networks where data processing devices comprising data processing resources are arranged distributedly within an hierarchical data processing

network infrastructure, and for managing the configuration, particularly configuration changes, of the data processing devices or the respective data processing resources. However, prior art of record neither renders obvious nor anticipates the combination of claimed elements in light of the specification. After a further search and a thorough examination of the present application and in light of the prior art made of record, claims are allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Miranda Le whose telephone number is (571) 272-4112. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James K. Trujillo, can be reached at (571) 272-3677. The fax number to this Art Unit is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Miranda Le/
Primary Examiner, Art Unit 2159